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Educational Research Bulletin

A COMPARISON OF TWO METHODS OF TEACHING GEOMETRICAL CONCEPTS[1]

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As one of the objectives of geometry is "to form habits of precise and succinct statements, and of the logical organization of ideas,"[2] it is first necessary to define and clarify those concepts which are to be used before it becomes even possible to attain this aim. This introduction to demonstrative geometry is so often a tedious failure that an improvement in the method of teaching is needed. This experiment is an effort to find which of the following two methods is the better.

The plan for the first method was to follow the introduction in the text used, the Wentworth-Smith *Plane Geometry*, with the customary omissions. The definitions as given there were thoroughly explained and assigned for study. During the recitation the pupils explained, defined, and illustrated the terms used. The technical concepts involved were compared with the general and colloquial uses of the terms, and distinctions were pointed out.

The second method did not depend upon the textbook at all. For each concept to be studied, a series of figures was placed upon the board. These were observed and compared in class, points of similarity or correspondence were noted, and the pupils were assisted by this general discussion in working out their own definitions of the term. Where the proper concept could not be developed from figures upon the board, as in the case of the angle, it was demonstrated by the rotation of rulers to represent lines. Thus the idea of motion was introduced. The second day the definition was reviewed and illustrated, and the discussion continued. Questions asked on the second day showed that in some cases pupils had consulted their textbooks in preparation for this review, but otherwise no reference to the text was made. The order of development depended to a great extent upon the class discussion—upon what terms the pupils themselves introduced—but the same concepts were covered as by the first method and in the same number of recitations.

To compare these two methods four X-B classes—denoted A, B, C, and D—were used. All were Y or average divisions except B, the second one, which was a group of X, or superior pupils. The classification of the pupils was determined by both their probable learning rates and teachers' judgments, and where these were not available, upon the pupil's past performance as shown by his grades. Since previous experience seemed to indicate the traditional method as more difficult for

(1) Read before the Cleveland Educational Research Club, April 17, 1925.

(2) From the *Outline of the Course of Study in Plane Geometry*, prepared by a special committee for the Cleveland Public Schools.

the pupil, that was used with the best group, B, and with Group A. The second or inductive method was used with C and D.

While intelligence data for several students in each of the Y groups were not available, the median probable learning rate was computed for each class. These varied from 114 in Group B to 109 in the A division, an apparently small variation. If, however, complete data for pupils in the Y groups were obtained, the medians for A, C, and D, would undoubtedly be lower, as more than half of the pupils whose probable learning rates were lacking, were taking geometry for the second or third time. These pupils were about equally distributed among the three classes. In the results that follow, therefore, it should be borne in mind that Group B is superior to the others in intelligence and in general school performance.

TABLE I. RESULTS OF TEST IN STATING DEFINITIONS AS SHOWN BY THE NUMBER OF PUPILS GIVING RIGHT AND WRONG ANSWERS

METHOD	BISECTOR		PERPENDICULAR		RIGHT ANGLE	
	Right	Wrong	Right	Wrong	Right	Wrong
Traditional						
Group A ...	11	8	15	4	13	6
Group B (X)	19	4	22	1	21	2
Experimental						
Group C....	17	2	19	0	16	3
Group D....	17	2	17	2	15	4

At the end of about three weeks a test upon definitions was given. Results for three of the most important concepts of geometry, the bisector, right angle, and perpendicular, are given in Table I. Regardless of the method by which the pupils were taught, any acceptable definition was marked right. As might have been expected, B is superior to the other groups, but C and D are even more noticeably superior to A.

Since errors in such a test may be due to the pupils' inability to express themselves correctly, not to errors in concepts, another type of test was given on three different occasions at intervals of about three weeks each. These three tests consisted wholly of figures. The pupils were asked to name the perpendiculars, right angles, or bisectors, as the case might be, in each figure when certain facts were given. For example, one exercise showed the right triangle *ABC* resting upon the hypotenuse *AB*, with *CD* perpendicular to *AB*. This

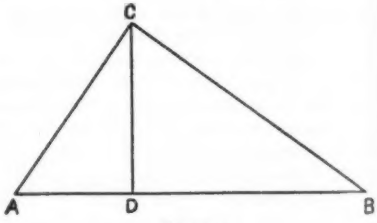

FIGURE 1

diagram is reproduced in Figure 1. The pupil was told:

ABC is a right triangle and *CD* makes equal angles with the hypotenuse *AB*. Name every right angle in the figure and every perpendicular.

Figure 2 represents another exercise in which were shown two lines, *AB* and *CD*, intersecting at *O* with lines drawn from the extremities of *AB* perpendicular to *CD*. The direction was:

O is the midpoint of both *AB* and *CD*, and the angles at *C* and *D* are right angles. Name every bisector and perpendicular in the figure.

In the series of figures, on the first test, none were more complicated than these; but bisectors, right angles, and perpendiculars in various positions were presented. The two later tests involved

greater complications. The most intricate diagram, given in Figure 3, showed a circle whose center was *O* and diameter *AB*, with *AC* and *BD*, tangents at its extremities, meeting a third tangent

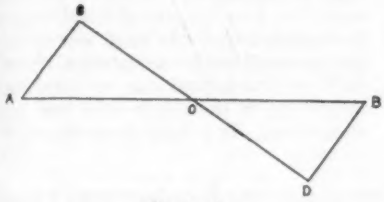

Figure 2

at *C* and *D*, respectively. Lines were drawn to *C*, *D*, and *E*, the point of contact of *CD*. This was the direction:

AB is a diameter, *O* the center of the circle. The angle *COD* and also the angles at *A*, *B*, and *E* are right angles. Angle *ACO* equals angle *OCD*, and angle *BDO* equals angle *ODC*. Name every bisector and every perpendicular in the figure.

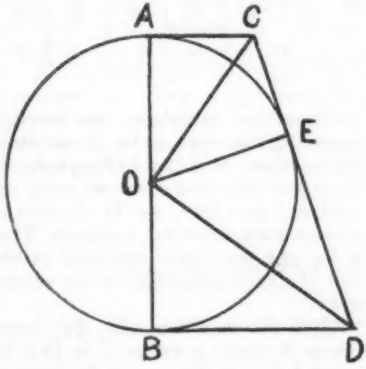

Figure 3

In the scoring account was taken of only those lines or angles which fulfilled the concepts immediately; those, coming indirectly from the given conditions or needing proof from a geometric viewpoint, were omitted entirely. Of the total number of bisectors, the percent of correct responses and the percent of absolutely wrong answers were calculated; and similar calculations were made for perpendiculars and for right angles. The results for each of the tests are given in Table II, while Table III, showing the percent of right minus wrong responses for all three tests, aids in the comparison

Table II. Percent of Right and Wrong Responses in Three Tests of Recognition of Figures in Three Fundamental Concepts

Method	Bisector		Perpendicular		Right Angle	
	R*	W†	R	W	R	W
	First Recognition Test					
Traditional						
Group A....	35	24	40	36	39	25
Group B (X).	48	19	65	19	58	32
Experimental						
Group C....	59	23	66	20	60	32
Group D....	83	25	66	17	69	29
	Second Recognition Test					
Traditional						
Group A....	68	34	55	17	43	40
Group B (X).	70	21	56	14	71	22
Experimental						
Group C....	75	27	54	22	74	14
Group D....	80	14	55	22	73	14
	Third Recognition Test					
Traditional						
Group A....	69	31	66	21	63	13
Group B....	85	19	82	7	85	7
Experimental						
Group C....	78	20	91	6	86	6
Group D....	88	16	90	18	78	12
Group E.....	80	4	84	5	88	1

* R is an abbreviation for Right.
† W is an abbreviation for Wrong.

As demonstration work began after the first recognition test, instruction in

all groups was the same. In each of the periods before the second and third tests, one lesson was given upon these concepts, and that alike to all the classes. This review was a drill upon definitions and the ability to recognize the things defined in the figures which were drawn upon the blackboard before the class began.

Unfortunately, on the day of the second recognition test, the periods for Groups C and D were somewhat inated guessing as is shown by the small percent of wrong responses.

When we examine Table III so marked is the improvement from test to test that the apparent contradictions are small in comparison. In regard to these variations from the general trend, it may be remarked that the small size of the groups tested makes the statistical results liable to fluctuations due to individual differences in the pupils from one test to the next. In a large group these dif-

TABLE III. PERCENT OF RIGHT MINUS WRONG RESPONSES IN EACH OF THREE RECOGNITION TESTS ON CONCEPTS AFTER THREE, SIX, AND NINE WEEKS OF INSTRUCTION IN GEOMETRY, RESPECTIVELY, IN X-B, AND TWENTY-SEVEN WEEKS IN X-A CLASSES

Method	Bisector			Perpendicular			Right Angle		
	1	2	3	1	2	3	1	2	3
Traditional									
Group A	11	34	38	4	38	45	14	3	50
Group B	29	49	66	46	42	75	26	49	78
Experimental									
Group C	36	48	58	46	32	83	28	60	86
Group D	58	66	72	49	33	72	40	59	66
Group E			76			79			87

shortened. The results of the test show that the pupils in these classes did much poorer work in the last question, which involved perpendiculars, than the other groups, although upon all the other questions they were better. No importance therefore can be attached to the low score upon this concept made by classes C and D in the second test.

To determine an approximate standard or goal of attainment, the third test was also given to a group of students (*E* in Tables II and III) in X-A geometry. These pupils came from four different teachers and had finished twenty-seven weeks of work in that subject as opposed to the nine weeks of the other groups. In the number of correct responses there is not much difference between B, C, D, and E, but Group E has almost elim-

ferences tend to balance one another, cancelling the effect as far as statistical results show. If data for Groups A and B are combined and compared with the combined data for C and D, all but one of these inconsistencies disappears. That is the one previously explained in the case of the perpendicular in the second test.

With this exception, also, the closest Group A comes to either C or D is 14 points below in the case of the bisector in the second test (Table III). From that the difference varies until it reaches 57 points in the case of the right angle on the same test. Hence, of the Y groups, those taught by the inductive method are easily superior. The experimental Groups C and D, at the point where difference in the method of teaching

ceased (Table III, test 1, or Table II) were equal, or superior, to the X group, B, in every detail. Even at the end of nine weeks covered by the three tests, the X group cannot be called generally superior to either C or D, as we had a right to expect.

One fact which cannot be shown here by statistical data is still an important consideration in weighing methods. The pupils in the experimental groups showed a far keener interest than did those in either A or B. One girl, a repeater, remarked after one recitation: "This is fun! I never thought anything could be interesting in geometry." They examined the figures, asking permission in some cases to go to the board to measure some of the lines, and took their tests with all the zest we have seen displayed in solving cross-word puzzles. In a Z class formerly taught by this method, in the case of the easier concepts, each pupil after examining all the series of figures wrote down his own definition. After the papers were collected, the eagerness with which the children looked up the definitions in the text to see if they had "guessed" right was a guarantee that they would remember more of what they read than usual.

A third advantage of this experimental method is that it compels a critical examination and analysis of figures from the beginning of geometry, and hence prepares better for demonstrative work. The pupils in picking out points common to all the figures in a series and discarding those facts applicable to only one or two, have begun to organize their ideas logically. This opinion is supported in general by a comparison of the four classes on the basis of the first regular departmental test which was given in the sixth week of the term. This test was of the traditional type, two propositions and two exercises for demonstration. Group A had a range from 5 to 97, median 60; B, a range from 19 to 95, median 60; C, a range from 24 to 100, median 63, and D, a range from 34 to 100, median 70. As no difference in instruction was made in the demonstrative work it seems reasonable to assume this result was due in part, if not entirely, to the difference in teaching the concepts.

While the data here given are meager, the conclusion from them is clear. The experimental method has given the pupils clearer concepts, a keener interest in geometry, and a better approach to demonstrative work than has the traditional. The interlocking of these three things has made the result only the more pronounced.

A COMPARISON OF TWO SPELLING BOOKS

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and
Luella C. Pressey
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If one but hastily compares the content of a modern speller with that of one which is twenty or thirty years old he is immediately impressed by the apparent simplicity of the small vocabulary in the newer books. It is the purpose of this report to present a comparison of two such texts, showing the number and difficulty of words. An examination of the preface and general arrangement of each of the books shows so clearly the changes in aims and methods of teaching

spelling that consideration will also be given these points. The books examined were Alton's *Descriptive Speller* (1901) and *Essentials of Spelling* by Pearson and Suzzallo (1919). Thorndike's *Word Book* was used as the standard for frequency of use, though it summarizes a reading rather than a spelling vocabulary.

It was impossible to examine all the words presented in the two books, so the writers listed every tenth word from each book. The first and striking difference between the two spellers, namely, the number of words contained in each, appeared at once and is presented in the upper part of Table I. The older book contained about four times as many words as the more recent one, and the grade apportionment was not distributed according to any observable plan. In the newer book, however, it will be noticed that the number of words increases, in general, from grade to grade.

Since every tenth word was selected, the total number of words in the two books is evidently 11,710 and 2,730, respectively. When the total number of words is compared, the striking difference, regardless of difficulty and frequency of use, is sufficient to show that the aims in spelling have been radically revised in the past twenty years. Evidently, the earlier aim was for the pupil to learn as many words as possible, whereas the present aim is to provide for the mastery of the words which are most frequently used.

The second point to be considered was the importance of the words presented in the two spellers. One check on this point was the frequency of use as indicated in the Thorndike *Word Book*. The second part of Table I summarizes these results. The words from the third-, fourth-, and fifth-grade lists in the newer book are all found in the Thorndike *Word Book*. For the older book, even the third-grade list contains some words that are not to be found among the most common ten thousand, and the words for the fifth, sixth, and seventh grades show from 40 to 45 percent of the words not in the Thorndike list.

A slightly more detailed comparison was made, to see how the words were distributed among the ten thousand given in the *Word Book*. It was felt that in the earlier grades the majority of the words presented should appear in the

TABLE I. THE NUMBER OF WORDS ESTIMATED BY SELECTING EVERY TENTH WORD AND PERCENT OF THOSE FOUND IN THE THORNDIKE LIST

	Grades						Total Number
	III	IV	V	VI	VII	VIII	
	Number of Words						
Alton	109	209	176	250	167	260	1,171
Pearson—Suzzalo	41	46	48	40	49	49	273
	Percent in Thorndike's *Word Book*						
Alton	94	82	59	60	55	74	71
Pearson—Suzzalo	100	100	100	98	88	90	96

lower thousands, that is, among the most commonly used words. The results of this further analysis are given in Table II. From Table II it appears that the choice of words in the earlier speller is even worse than the percents indicated by Table I. Even in grade III, less than half of the words are to be found in the first thousand of Thorndike's list, while from grade V on over half the words are either in the last five thousand or not contained in Thorndike's list at all. For the newer speller the situation is almost completely reversed. The seventh and eighth grades are the only grades whose lists contain an appreciable number of words above the first five thousand of the Thorndike list, while in grades III, IV, and V from one-to two-thirds of the words appear in the most commonly used thousand.

A few words remain to be said in the way of general conclusions. The Alton speller shows no evidence of scientific planning. No reason can be found for presenting nearly one thousand more words in the fourth grade than in the third, nor for giving sixth grade approximately 800 more words than either the fifth or the seventh. It is also difficult to justify the drop from 480 to 400 in the Pearson-Suzzallo book. As the title may suggest, the *Descriptive Speller* attempts motivation by the grouping of words pertaining to a topic in which the children are supposed to be interested. Since it is not likely that child nature has undergone a marked change in twenty

TABLE II. THE PERCENT OF WORDS BY GRADES IN THE VARIOUS THOUSANDS AS PRESENTED IN THE THORNDIKE LIST

	Grades						Average
	III	IV	V	VI	VII	VIII	
Percent in first thousand							
Alton	45	22	9	0	0	2	13
Pearson and Suzzallo	66	45	31	12	3	0	26
Percent in second thousand							
Alton	20	12	8	7	0	9	9
Pearson and Suzzallo	17	22	38	30	26	10	23
Percent in third, fourth, and fifth thousand							
Alton	21	27	25	20	25	37	26
Pearson and Suzzallo	17	26	27	46	46	35	32
Percent in last five thousand							
Alton	8	21	17	33	30	26	22
Pearson and Suzzallo	0	7	4	10	11	45	13
Percent not in *Word Book*							
Alton	6	18	41	40	45	26	30
Pearson and Suzzallo	0	0	0	2	12	10	6

years, the attempt was evidently unsuccessful. It is hard to imagine that the grouping of such words as *circuit*, *oxygen*, *valve*, *pressure*, and *artery*, under the heading of "A Common Carrier" would serve as an incentive for a fifth-grade pupil to learn to spell. The upper-grade words were taken from textbook discussions and when isolated are frequently not even concerned with the topic. Just why the words *stupendous* and *subterranean* should be included under the topic of "Idaho" in preference to certain other states, it is difficult to understand. A child of an inquiring turn of mind would indeed be an unfortunate member of a class which followed this text, because, if it were possible for him to satisfy himself by making the necessary connections between the words and the topic, he would have no time left in which to master the spelling. The author clearly recognized the need of technical vocabularies but failed to realize that there is a limit to such a need. From the presentation of such words as *larvae*, *cochineal*, *chrysalis*, *antennae*, *calyx*, and *ovules*, one might infer that all fifth-grade children were eventually to be biologists. All in all, there seems to be little about this speller to recommend it in the light of present-day developments.

Pearson and Suzzallo have attempted no such scheme of motivation. One of the strongest features of their book is the provision for systematic review. Each lesson in the lower and middle grades presents only two new words, and these are printed in heavy type. Review words are included in the Alton speller, but they are not so indicated, and thus the teacher, who unfortunately could not remember the six thousand or seven thousand words previously taught, would waste much time in needless drill on review words, assuming, of course, that children might remember words learned in such long lessons.

Pearson and Suzzallo provide for the application of words by means of the frequent dictation review lessons. These present a marked contrast to the dictation lessons in the *Descriptive Speller*, many of which, according to the author, were included for their intrinsic worth and as a test for power to use the English language. Granting that the pupil can appreciate such worth, the lessons in literary appreciation belong to literature rather than spelling, since psychological evidence shows that correct spelling results from appropriate and constant drill rather than from appreciation of literary value. Nor does the writer demonstrate how the mere writing of a selection which a child has not the power to comprehend will develop power over English.

A quotation from the Alton Speller is particularly illuminating:

> Written spelling for accuracy, oral spelling for pleasure and facility. Where a vocabulary should be written once it should be spelled orally and rapidly and confidently a dozen times.

According to this statement the author believed that pleasure to the individual rather than accuracy in the spelling process is the aim in spelling. He also assumed that all pupils are equally "auditory minded." He says further that oral spelling gives a sense of a strength satisfactory to the learner. Perhaps so, but what use has the pupil for such strength? Pearson and Suzzallo recognize the value of oral spelling for the purpose of motivation, but frequently caution the teacher of its many dangers.

The writers believe that these comparisons are sufficient to show something of what is being accomplished as a result of scientific study of spelling problems. While the present spelling texts may be far from perfect, they have done much toward solving the problem of elementary spelling, and present research promises that the problem will be made even more simple for the learner.

METHOD OF ESTABLISHING NORMS FOR STANDARDIZED TESTS

It is possible and practical to standardize some tests in several grades and measure the progress made by pupils after each year of study. Pupils should do better in the addition of integers and read faster with a better comprehension of the printed page after each year of school attendance. With the content subjects such as history and geography, however, this is not always the case. For example, a pupil who has studied the subject of South America in the sixth grade may know more about the subject at the end of the sixth year than he will a year later. Another difficulty in standardizing a content-subject test is due to the fact that a certain kind of history or geography is taught in the fifth grade in one city, in the sixth grade in another city, and in the seventh grade in still another city. The Stevenson-Ridgley-Shipman Geography Tests on the different continents were, therefore, standardized by giving them only to those pupils in a given grade who had completed the study of a particular continent during the past semester.

TABLE I. NORMS OF THE STEVENSON-RIDGLEY-SHIPMAN GEOGRAPHY TESTS: EUROPE, JUNE, 1925.

	Grades			
	V-A	VI-A	VII-A	VIII-A
Part I				
Form 1	16	25	26	27
Form 2	14	24	25	26
Form 3	14	21	22	23
Part II				
Form 1	7	10	11	12
Form 2	6	9	10	11
Form 3	7	10	11	12

An advantage in establishing norms by this method is that the test may be used as a regular examination for the pupils. It will be possible, therefore, for each teacher or supervisor to compare the standing of her pupils with other children who have just completed the study of a given continent.

The norms given in Table I indicate the medians obtained by pupils in the different grades on the geography tests devoted to Europe. Similar norms have been established for the test on South America.

NEW TESTS

Study-Period Projects by Elda J. Merton, assistant superintendent of schools, Waukesha, Wisconsin, includes tests and practice exercises in silent reading for grades I, II, and III. The material is illustrated by attractively colored scenes taken from well-known tales and nursery rhymes. Words, phrases, and sentences are so arranged as to be used with the pictures in picture matching, booklet-making, and games. These tests are published by Laidlaw Brothers, Chicago.

The English Survey Test for grades IV to VIII, published by the Public School Publishing Company, Bloomington, Illinois, is prepared in two forms, Language Usage and Sentence Structure. Language Usage consists of two sub-tests, the first a multiple-choice test; in the second test each sentence has an omission which is to be filled in by the pupil.

The Sentence Structure Test is so arranged that two scores are obtained. Form 1 includes a score for each sentence on essential structure, beginning capitalization and ending punctuation, spelling, technical correctness, and grammar and language usage. The comprehension score measures the pupil's understanding of the task presented.

The English Survey Test for grades VII and VIII includes a test in grammar and a second test in literature information.

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DIRECT VERSUS INDIRECT TEACHING

The question is raised again and again as to whether various desirable educational products shall be sought by means of direct or indirect approach. Even in the more formal subjects we have tended to wobble between these two positions. Most of us who have been in educational work for some time distinctly remember the period when many people advocated the incidental teaching of spelling. The theory was that this desirable skill could be most efficiently attained by giving it consideration only when it arose in a natural setting. In other words, no direct attack on the problem was to be made, but instead children were to learn spelling quite unconsciously. Probably most of us remember arguments, more or less similar, regarding the learning of the four fundamental operations of arithmetic. The process was to be so rationalized that direct attack and drill were to disappear.

The testing movement has shown the indirect method to be ineffective in both of these subjects, and we are back again to a day when we recognize the value of drill and distinguish skills or automatic processes from problem situations which require deliberation. As we have tended to turn our attention from the teaching of facts or mere subject-matter to the education of our children through the formulation of desirable habits and the creation of worthy attitudes and ideals, the debate concerning direct and indirect teaching has again come to the forefront. Many are quite sure that ethical character must be taught, if taught at all, by indirect approach. In fact, we still hear people say that character must be "caught" and not "taught." We believe there is no evidence in the records of the past to substantiate this theory. Where direct moral education has been a failure it is more than probable that the reason for failure can be found in other factors than the direct approach. There is plenty of evidence that forward-looking schools and educators are working directly on the formulation of teaching material and the gradation of instruction for direct attack on this problem.

An interesting news item, which certainly has bearing upon the question of direct versus indirect teaching, was released during the last week in September. The National Bureau of Casualty and Surety Underwriters announced three university fellowships of $1000 each to be devoted to the study of safety education. The three students receiving them will be working toward the degree of Doctor of Philosophy. Miss Ruth Streitz, at Teachers College, Columbia, will study "The Grading of Subject-Matter for Safety Instruction in the Elementary Schools." John E. Neitz, at the University of Chicago, will work upon the problem, "The Preparation of a Course of Study in Safety Education for the Use of Normal Schools." James Vaughn, also at the University of Chicago, will investigate "The Relative Importance of Positive versus Negative Methods of Instruction in the Fields of Safety Education." Evidently the National Bureau believes not only that something should be done about the

matter, but also that scientific education may assist, while the subjects themselves indicate that there is a predisposition toward the positive attack.

E. J. A.

Two outstanding conditions, says Paul Klapper in the September *Journal of Educational Research*, have retarded the development of experimental education. Education has concerned itself too much with preserving the past and too little with preparation for living and participating in life. A second deterring influence has been the absence of commonly accepted objective measures by which the products of new educational method might be measured. Although the testing movement has made considerable progress in the past few years, no test of intelligence or of educational achievement has yet been devised which can be accepted with similar validity to that granted to the present linear foot or the pound of dry measure.

The reasons for this are many, Mr. Kapper believes, but he limits his discussion to six, which he considers the most important:

1. Standardized tests are suffering from overpopularity. Their popularity is almost an affliction. Everybody has an opinion about their validity. The comparatively simple technique in devising a test has been mastered by many. The result is a deluge of tests in every subject. Test follows test until no one in America knows all the tests or is prepared to present conclusive data on the relative merits of any one of them. . . . . We need not more tests, not further unquestioning acceptance of them, but rather a more scientific technique of developing and evaluating tests and a more critical attitude toward them. Nothing more desirable could happen to further the cause of scientific testing than to prohibit for five years the addition of a single new test to the surfeited market of test material.

2. Tests are suffering from our inability to formulate clearly and concisely the definitions of basic terms and ideas. We are measuring intelligence, but what is intelligence?

3. A retarding factor in the development of standardized tests is the arbitrary character of the measuring unit . . . . The scores found by using even our best scales, Thorndike assures us, are arbitrary totals of units of unknown values.

4. Another retarding factor in the development of scales is their frequent lack of relation to classroom practice.

5. A fifth retarding factor in the progress of measuring scales is crudeness of technique.

6. A final retarding factor that we must mention is the apparently extravagant claims made for certain tests.

He continues:

Despite these limitations, the tests have weathered the period of introduction. They are decidedly superior to the capricious tests made by teachers or supervisors. Through these tests we can today achieve more accurate grading of children; we can determine more reliably the permanent effects of our teaching; we can evaluate less capriciously the comparative teaching ability of different teachers; we can gauge, impersonally, the pedagogic worth of special teaching devices and courses of study. The more accurate our knowledge of teaching, of teacher, and of pupil, the more effectively can we plan for the development of the child.

The blame for excessive high-school failures, according to Professor Edmonson, of the University of Michigan,[1] may usually be laid at the teacher's door. Marking, with its subjective element, is an eternal problem. The teacher's grade is generally the criterion of failure and such judgment, of course, is very arbitrary. Marking is sometimes a grand reckoning, but the pupil's is not the greater responsibility. The reason for failure frequently goes back to the teacher. If she does not organize the minimum essentials of her work and drill adequately on them, she does her pupils an injustice. Teaching the subject-matter and forgetting the class lead to all sorts of dangers. In the glow of presenting her material, she may ignore serious conditions in her students. She should never assume that preceding teachers have brought the pupil to the

(1) Edmonson, J. D. "Why High-School Pupils Fail," *High School Quarterly*, 13:235-37, July, 1925.

exact point where her work begins. She should *know*. She should never assume that the pupil is doing his daily work. She should know that, too. Moreover, she should make some provision for inadequate preparation or poor performance. Lazy or low-grade pupils cannot be ignored. It is not fair to call down failure like a bolt from the blue at the end of the semester when neither help nor warning has been given.

The teacher should have a clear-cut objective and hold her pupils to it. The hazy or slothful condition of a student's mind is directly responsible for failure, but the teacher who permits such a condition is indirectly, and more gravely, responsible.

SUGGESTIONS FOR IMPROVING THE PRESENTATION OF ENROLLMENT AND ATTENDANCE DATA IN CITY SCHOOL REPORTS

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From the detailed study of 164 annual reports of city superintendents several definite suggestions have come for the improvement in methods of reporting data on enrollment and attendance.[1] In outlining improvements, five topics will be considered, but the writer hastens to add that nothing especially new or original will be attempted in the suggestions which are to follow. The only excuse for giving them, lies in the fact that current practice, as shown by the study of 164 superintendents' reports, makes use of only a few items. The ones which are used appear infrequently. The ideas to be presented are given with the hope that the superintendents will find the suggestions worth while and with the conviction that we school men must have the more technical elements of our work outlined rather clearly and simply if we are to report data which are comparable.

WHAT MEASURES OF SCHOOL EFFICIENCY SHOULD BE USED?

Aggregate days enrolled.—The definition usually given states that "aggregate days enrolled" is equal to the sum of the total days enrolled for all pupils in attendance in the district. The "total number of days that a pupil is enrolled" is usually defined as the number of school days between the date a pupil officially appears at school and the date at which he is legally exempt from attendance. Legal exemptions, however, are not uniform. West Virginia allows the local superintendent complete authority to exempt pupils from school attendance. When such laxity in requirements is allowed, enrollment data cannot be even approximately comparable. More definite requirements are needed.

There would seem to be certain principles which should guide school officials in determining the number of days that a child is enrolled. Some of these principles might be stated as follows:

1. A child should not be dropped from the roll because of any amount of absence.
2. A child should be dropped from the roll the day he ceases to have his home in the school district.
3. A child should be dropped from the roll the day of his death.
4. Children who are permanently disabled, as certified by an accredited physician, should be dropped from the roll, unless schooling is provided for them. Permanently disabled is to be interpreted in the same sense as used by insurance

(1) Heck A. O. "Enrollment and Attendance Figures in the Annual Reports of City Superintendents," *Educational Research Bulletin*, 4: 298-304, October 7, 1925.

companies. Such a rule eliminates all dropping from the roll due to temporary illness, whether it be for a week or for six months.

5. Children who are permanently disqualified mentally to do school work should be dropped from the roll, unless special schools are provided for them. Authority for dropping such children from the roll should be based upon the recommendation of a reputable psychologist.

6. A child should be dropped from the roll when legally employed upon a working or employment certificate.

7. A child should be dropped from the roll if he quits school when he has reached the compulsory school-age limit.

8. A child should be dropped from the roll when he has completed the regular high-school courses, unless he remains in school for additional work.

If the suggestions just given were followed carefully the aggregate days of enrollment for different districts would be far more comparable than the data which are being secured at the present time. A uniform procedure would thus be followed at least with respect to those children who enroll at school.

Pennsylvania plan.—The state regulations concerning enrollment in Pennsylvania read as follows:

> The Teacher's register of pupils belonging to her school shall contain the names of all children assigned to her school from the enumeration list at the opening of the school *by the board of education, and such additions* as may be made thereto during the term, and no child shall be counted as not belonging to the school unless upon investigation by the local attendance bureau or the proper school official.
>
> All pupils "belonging" to the school shall be enrolled the first day of school and marked absent if they do not enter. If *non-resident* pupils or *any over sixteen years of age*, or others who have moved into the district during the term, are enrolled after the first day of school, indicate by "E" (entered), on the date entered.[1]

The Pennsylvania plan is unique. No other state in the Union is so stringent regarding the enrollment of children of compulsory school age. One state, at least, is attempting to make the enrollment data which it collects, actually state how many children it is responsible for educating. The aggregate days of enrollment which Pennsylvania reports is the same as the total possible days of enrollment which some districts report.

It is the thought of the writer that all districts should follow a plan similar to that used by Pennsylvania. Every child of compulsory school age who lives within the district should be counted on the roll the opening day of school, whether he appears in person or not. Why should children, who are late in enrolling, not be counted as absentees just as they will be counted, when absent, after they have appeared in person and enrolled? Why should absences be counted against the child who entered the first day and is sick during the second week and not against the child who deliberately missed the first week or month of school? Is not the district's responsibility far greater for the latter type of child than it is for the former? If attendance and enrollment data are to be used for the purpose of showing how well the district is performing its duty by the children, then a plan similar to that used by the state of Pennsylvania is absolutely essential.

In the past, school men have realized that there was a considerable discrepancy between the number of children who were on the roll and the number of children of compulsory school age who lived in the district. In an endeavor to get some measure of this discrepancy, the census data for the district have usually been used as a check. The percent which the total enrollment is of the census figures has been found. Such a measure is for comparative purposes but little better than no measure at all. In some states census ages are so limited that frequently the total enrollment is larger than the census. These ages in all states vary so much that the percentage figure just suggested has but small value. The attempt to secure a measure of this discrepancy between enrollment and the total number who

(1) *Pennsylvania State School Register*, p. 1.

should be enrolled is significant. The Pennsylvania plan would seem to take care of this problem quite well.

If the eight suggestions made in the early part of this section were adhered to and if the Pennsylvania plan, or one similar to it, was adopted by all school districts, enrollment data would not only be far more comparable than they are at present, but they would also tell the story which they are supposed to tell much more adequately. If statistics are to be of any value, they must be accurate. Child-accounting data will never be accurate until we agree upon a uniform procedure and then follow that procedure rigorously. If they are not to be accurate it would be better if the teachers and principals were to spend their time at other tasks and cease accumulating statistics.

Aggregate days attended.—A second measure to be used in determining school efficiency is "aggregate days of attendance." The definition of this term is much more commonly agreed upon than was the one just discussed. There are, however, two definitions employed. The more common one states that aggregate days of attendance equals the sum of total number of days attended by all of the pupils who have been enrolled in the district during the year. If, for example, one hundred different children have been enrolled in the district, and if we know the total number of days each of them attended school, aggregate days attended may be secured by adding the attendance for the hundred children.

The second definition says that aggregate days of attendance is equal to the sum of the total attendances for the entire year of all pupils enrolled at the close of the year plus the attendance of those children who were in attendance, but who, for some reason, permanently *withdrew* from the system. Thus, if there were two or more schools in the district, and if at the close of the year school A had just received by transfer several pupils from other schools in the system, the entire year's attendance for those pupils is counted as part of the attendance for school A. Moreover, pupils who have transferred from school A take their attendance with them. This difference in method of determining aggregate attendance, however, does not change the attendance data for the entire district. If the ruling were to be applied upon a state-wide basis, instead of a district basis, attendance data for the district might be materially affected.

Which of the two methods should be used is probably not as important as determining that one or the other shall be used uniformly. The latter method may be criticized upon the basis that the attendance data reported do not represent the actual attendance of a given school, or if the ruling is state-wide, they do not represent the actual attendance of a given district. If Charles, for example, is in district A the first two months and in district B the rest of the term, his entire attendance is reported by district B. If district A were lax in enforcing attendance it might well be that Charles' attendance the first two months would be very poor, whereas, due to good enforcement procedure, he was quite regular in school B. The assumption that could be made is that had Charles attended district B the entire term, he would have been regular and B's attendance report would have been better than it now is. District B has had to suffer in the attendance report, due to lax attendance enforcement in district A. Under the first rule this situation would not have arisen. Each district is accredited with its own attendance data.

Some cities in securing aggregate days attended follow the California plan of allowing an extra day of attendance for each four hours a pupil spends at evening school. This device is probably a good one if aggregate attendance for evening

schools is not reported as a part of the aggregate attendance for day schools. A great many systems include an artificial attendance for institute days and holidays in the aggregate days of attendance. Such artificial attendance data certainly are of no help to the school man in understanding his attendance problems. If such a device was originated for other purposes, those purposes should be attained by other means. Attendance data should represent the facts they are supposed to represent just as nearly as possible.

Percent of attendance.—The two preceding items are probably the most important. If a percent of attendance is desired, it can be secured from these two figures. A percent of attendance based upon these data has a significant story to tell. Comparisons can be made based upon such a measure of efficiency between different school systems. It tells the reader what percent of the school opportunities offered are actually made use of by the people of the community. This surely is the story which percent of attendance should tell.

Other measures.—If the average number enrolled or the average daily attendance is desired, the only other item which should be reported is the number of days the schools were actually in session. Total enrollment as defined in an article in a previous issue should be reported.[1] To be sure, data concerning causes of non-enrollment and non-attendance should be reported. The main facts, however, on enrollment and attendance are probably those already suggested and represent that kernel of data which all city superintendents ought to be reporting.

How May These Measures of School Efficiency Be Presented?

Based upon the current practice of city superintendents two suggestions seem quite worth while. One of the suggestions demands that data should be cumulative over a long period of years so that the progress of the school district can be noted. The other demands that material concerning other school districts should be available so that the city reporting can be fairly judged in comparison with other cities.

The remark that these suggestions are based upon current practice must not be taken to imply that most of the 164 cities, whose reports were studied, were presenting attendance data in this way. As a matter of fact only a few presented material which made it possible to make comparisons with their past records or with the records of other school districts. Such a practice, however, is being followed and to the writer it seemed good. Any kind of data for a single year, when appearing alone, has very little meaning. The reader has no standards for determining whether the situation as shown by these data is significant or not.

It would seem that the two suggestions just made might almost be considered the A, B, C's of statistical reporting. The writer hesitates to push the analogy because of the fact that such a huge percent of the reports failed to take them into account.

Some Methods Which Might Be Eliminated

Detailed data.—The practice, of presenting in annual school reports page after page of statistical tables, has been so universally condemned in recent years that it seems a bit trite to refer to the practice in this article. After looking through reports, however, which contained page after page of uninteresting and uninterpreted figures, it seemed that at least a reference to the practice would not be out of place.

The Nashua, New Hampshire, report lists five separate items for each teacher in the system. These items are: "whole

(1) Heck, A. O. "A Measure of the Comparative Efficiency for the Public-School Systems," *Educational Research Bulletin*, 4: 304-16, October 7, 1925.

number registered," "number not registered in other public schools in Nashua," "average daily attendance," "average daily absence," and "average membership." Nashua is a city of 28,379 according to the 1920 census; the census for 1922 showed 3,719 children registered in the public schools; the 1922 annual report gave the above data from each of the teachers, covering pages. Everitt, Massachusetts, followed a similar practice in its report for 1923. Ten pages in a school report of some ninety pages were given over to a presentation of enrollment and attendance figures for each teacher and for each school building in the district. Everitt is a city of 40,120 population. Crauston, Rhode Island, having a population of 29,408, reported these data in a similar fashion in its 1923–24 annual report.

The writer has no objective evidence to present which will show either the usefulness or the futility of such a practice. These data may be useful when reported by schools. It might be interesting to the community to know that over a period of years the enrollment of certain schools has been steadily increasing, and the enrollment of other schools, constantly decreasing. When, however, these data are presented by teachers, the writer will allow the reader to decide whether the uses which can be made of such data will justify the expense of reporting them. This does not mean that these facts will not be available at the superintendent's office. It does mean that the superintendent's annual report is not the place in which to file them.

The annual school report ought to be in a very real sense, the superintendent's yearly message to his public. That message ought to inform his patrons of his ideals, his plans, his hopes, his program, the reasons for that program, and the demands which such a program will make upon the patrons of the school. If this be the purpose of the superintendent's report then pages of uninterpreted statistics concerning the enrollment and attendance of the pupils of each teacher in the system is not only useless but actively harmful in so far as it tends to lesson the reader's interest in the remainder of the report. Statistics, allow us to repeat, will be needed, but they must be such items as serve to further a given discussion and not such as are only useful in filling space.

Enrollment and attendance data not organized by school units.—Some cities report enrollment and attendance data but fail to designate whether these facts represent all school units or just part of them. Day schools, evening schools, and continuation schools are sometimes reported as one unit; sometimes each is reported separately. Sometimes, when they are reported separately, it is difficult to know that this is the case, and only a careful reading of the report will give the necessary evidence. All such practice makes the annual reports hard to interpret. Frequently data concerning day schools are reported as a unit; data for high schools, elementary schools, and the kindergarten are not listed separately. Some such rough classification of the fundamental data concerning enrollment and attendance, at least, ought to be made in order that comparisons between units of various school systems can be made.

SPECIFIC DEFECTS TO BE GUARDED AGAINST

Omission of definitions.—Among 164 school reports examined, in only two instances did the superintendent even make a suggestion concerning terminology. One of these referred the reader to a report several years old; since the older report was not available, the suggestion was useless. As long as uniform terminology is lacking the least we can do is to state with care the definitions of all technical terms used in reporting. This need not take up a

great amount of space. We can, for example, at least explain that "total enrollment" means either with or without duplications in the district, or that it means with or without duplications in the state. In some way each of the other important terms can be defined.

Errors in computation.—This would seem to be the least excusable of all mistakes. In report after report which figured "percent of attendance" based upon "average daily attendance" divided by "average membership" the percentage figure was reported incorrectly, due evidently to errors in computation. Sixteen reports, or approximately 25 percent of the number using this kind of a percentage figure, were in error anywhere from one to four percent. Data of this character should be checked very carefully. When several such errors are found in the printed report, serious doubts are raised in the mind of the reader concerning the accuracy of all the data upon which these figures were based.

Disagreements of data within the same report.—Enrollment data frequently appeared in different parts of the school report which did not agree. Fitchburg, Massachusetts, reported total membership as 5,322 on page 17;[1] on page 47 an average attendance of 7,897.07 was reported; and the age-grade table on page 51 showed 5,610. Other cities reported a total for age-grade studies which was far below the total enrollment. Usually one could explain the inconsistency if he read the report with sufficient care. This, however, should not be necessary. In an age when we talk about foolproof mechanical devices we ought to be presenting school statistics so clearly that they may also be foolproof. In many reports a careless reader might get a wrong impression of school facts due to the seeming, as well as to the actual, disagreements that appear in school statistics.

Basic data omitted.—Frequently the reports contained "total enrollment," "average daily attendance," and "percent of attendance." When the latter figure was computed upon the basis of the first two, it was often found to be so much in error that the writer was certain the percent was based upon an "average membership" figure. This however, was not given. Fundamental data, at least, ought to be reported even though the derived data, such as percent of attendance, is omitted. The latter, in such a case, can be computed whenever needed.

In the 1922 report for the city of East Orange, New Jersey, the following data are given:[2] (1) total enrollment 9,132; (2) average daily attendance 7,437; (3) percent of attendance 91.7. If these data had not been checked, one might have assumed that the percentage figure was based upon "total enrollment," since neither are the terms defined nor is the procedure explained. This, however, is not the case. When the average daily attendance, 7,437, is divided by 9,132, the resulting percent is 81.4. This corresponds closely to the average percent of 123 cities when total enrollment was used as the base.[3] The percent 91.7 which was given in the report corresponds fairly well to the average for 102 cities when average membership was used as the base. East Orange was not alone in this respect. A great many cities followed a similar procedure.

An index not provided.—In many of the school reports no index was given. Probably no one general feature of an annual report is as important as a good index. A reader who wishes to find quickly certain items from a number of school reports has a most discouraging

(1) *Annual Report of the School Committee of the City of Fitchburg, Massachusetts, for 1921.*

(2) *Annual School Report, East Orange, New Jersey, 1922.* p. 24.

(3) Heck, *Op. Cit.* p. 310.

task before him when no index is provided.

Many cities printed an index in the annual report, but it was a very inadequate one. Data for enrollment and attendance were not listed under those heads. Sometimes they were found upon some one of the pages which contained "statistics." In another report no specific title could be found in the index that referred to them. In these instances the data could only be found by paging the report.

Data scattered through the report.—If enrollment and attendance data are valuable for comparative purposes, it would seem advisable that those facts be reported and discussed in a specific section of the report. The fundamental items which have been suggested in this article have often been reported incidentally in various parts of the report. If they are to be used for comparisons such a presentation will prove extremely inadequate.

City summaries are frequently omitted.—These data are often given for each school within a city district, but nowhere in the report are they given for the city; in other words, no summaries are presented. For comparative purposes the city summaries are the data which are very much needed.

UNIFORMITIES WHICH WOULD MAKE THESE DATA MORE INTELLIGIBLE

The terms concerning enrollment and attendance should be uniformly defined. Our statistical language for all cities and states should be the same. It should not be necessary for the reader to learn a new language every time he reads a different school report.

The rules for securing these data should in all cases be identical.

A definite section of each report should be used for reporting enrollment and attendance data. This makes it possible to index them.

The fundamental items suggested in this article should be reported by all cities.

These data should be distributed by the different school units of the school system. The reader should be able to break up the city totals into subtotals for the elementary schools, high schools, evening schools, and continuation schools.

CONCLUSIONS

1. Total enrollment, aggregate days enrolled, and aggregate days attended should be reported by all school systems.

2. The Pennsylvania system of determining who are upon the school roll represents an ideal which we ought to be striving to attain, if we wish to secure a measure of how fully each school system is taking advantage of the schooling provided.

3. Enrollment and attendance data for a city should make possible comparisons with other cities as well as comparisons with its own past record.

4. Page after page of uninterpreted statistical tables on enrollment and attendance should be eliminated from annual school reports.

5. The annual reports should state with care the definitions which are to be used.

6. Care should also be taken to eliminate all arithmetical errors and to make sure that all data agree.

7. Exact comparability, as has been indicated again and again, will not be secured even if all the suggestions contained herein are put in force. The best that we can say is that they will be much more comparable than data now are. At present comparability among these data stands at about the zero point upon a quantitative scale. The utilizing of these suggestions will certainly raise it to a much higher positive value.

EDUCATIONAL READINGS

Haggerty, M. E. *The Incidence of Undesirable Behavior in Public-School Children*, *JER*, 12:102–22, September, 1925.

Probably a larger proportion of the school population presents behavior problems than is usually thought to be the case. Behavior symptoms first appear in a variety of forms. Believing this, the behavior records of eight hundred pupils in a Minneapolis school were studied. Boys of elementary-school age present more behavior problems than girls, no grade seems free from them, and there is a tendency for behavior problems to increase at both ends of the scale of intelligence. The author says, "Over-age and retardation, low intelligence, and undesirable behavior, these three-fold factors in perplexing combination face every teacher in the school studied . . . . The capital-letter expression of this unholy trinity was found in the subnormal room where 93 percent of all pupils were rated as behavior problems and where the average behavior score was 47."

Morrison, J. Cayce. *New York State Regents Literacy Test*, *JER*, 12:145–55, September, 1925.

In 1922, Commissioner Graves of the University of the State of New York, fulfilling the requirements of recent legislation appointed two committees, one to formulate a literacy test to be given to new voters, and a second to devise a plan for administering the test. Form No. 2 of the thirty tests prepared by the committee is given in this article. Here is a fair test based upon reasonable standards by which the new voter may prove his ability to "read aloud intelligibly" and "write legibly." This test by legal enactment takes the place of the fifty-word extracts from the State Constitution which previously was the ordeal through which the new voter must pass to prove his claim to literacy.

Partridge, E. A. *College-Entrance Credentials from the High-School Point of View*, *SR*, 33:422–27, June, 1925.

Busy high-school principals doubtless will echo the author's question, "Why is it not possible for the colleges to consult the convenience of the secondary schools and adopt a simple uniform blank, such as that adopted by the National Association of Secondary School Principals?" The writer even recommends that next June his school secure a sufficient supply of these standard blanks and submit the necessary records on them, excluding the miscellaneous colors, forms, and sizes of college-entrance blanks with all the miscellany of information which they demand.

Jordan, J. N. *Prognosis in Foreign Language in Secondary Schools*, *SR*, 33:541–46, September, 1925.

This article reports "the results of two years of personal research in, and observation of, pupil prognosis." In his experiment, the author used both special-ability tests and mental-ability tests for prognostic purposes and compared the results from the two kinds of tests. The Wilkins Prognosis Test in Modern Languages and the Terman Group Test of Mental Ability were the tests used.

The author admits that no very definite and accurate results were obtained, but concludes that the correlations were high enough to indicate that prognosis is valuable in foreign-language work. He also concludes that the intelligence test has "slightly greater values for prognostic purposes."

Johnson, Franklin W. *The Department Head*, *SR*, 33:523–31, September, 1925.

This article deals with the place of the department head in the high-school organization as an auxiliary to the high-school principal. The increasing importance and changing status of the department head is attributed to the progressive professionalization of the principalship, although as the author says, prevailing practice does not reveal a recognition of the importance of the headship. The duties of the position are described.

Nice, Margaret Morse. *Length of Sentences as a Criterion of a Child's Progress in Speech*, *JEP*, 16:370–79, September, 1925.

"A child's skill in sentence structure affords a simple criterion of his advancement in the mastery of speech"—this is the opening sentence of Mrs. Nice's article and around this assumption she builds her case. Child speech is divided into four stages dependent on the sentence: single words, early sentences, the short sentence of three to four words, and the complete sentence of six to eight words.

McGaut, J. R. *The Superintendent's Analysis of School Finances*, *TCR*, 26:383–92, January, 1925.

The writer expresses his purpose as follows: "It is here proposed to set forth the types of financial data which every superintendent of schools should have available if his school system is to be operated intelligently and economically, and to go into some detail in explaining how to arrive at these facts accurately and scientifically." The discussion is not as complete as it might be,

Note.—The abbreviations used in this number are: *JER*, Journal of Educational Research; *SR*, School Review; *JEP*, Journal of Educational Psychology; *TCR*, Teachers College Record; and *S&S*, School and Society.

nor does it contain anything new. A diagram is given which will be helpful in distributing expenditures to secure units of costs which are comparable with unit costs in other cities. Superintendents concerned with budget making and cost accounting will find this a suggestive article.

WERNER, OSCAR H. *The Trend in the Study of Foreign Language in American High Schools*, S&S, 21:268–72, February 28, 1925.

The status of foreign-language study in our secondary schools in 1895, 1905, 1915, and 1922 is shown by a series of tables based on data obtained from Reports of the U. S. Commissioner of Education. Inasmuch as both the general trend for the last forty years and the particular changes brought on by the World War are covered in this study, it is very interesting to school men and those engaged in curriculum building.

Among the more pertinent conclusions we find that: (1) the total number of pupils studying foreign languages is on the increase; (2) the percent of pupils studying foreign language based on high-school enrollment is decreasing; (3) colleges are dropping foreign languages from their entrance requirements; and (4) only one-third of the pupils continue the study of foreign language more than one year.

IN PAPER COVERS

OHIO. *Library Laws of Ohio.* Columbus, Ohio, State Library, 1925. 68 pp.

The school people of Ohio will be particularly interested in this pamphlet because in addition to the enactments regarding the county, township, and municipal libraries, the clauses dealing with school libraries and provisions regarding the State Library are here collected in convenient form for immediate perusal.

BARR, A. S. AND OTHERS. *Elementary-School Standards for the Improvement of Teaching.* Ann Arbor, Edwards Brothers, 1924. (Mimeographed).

Mr. Barr and his associates of the supervisory staff of Detroit have endeavored to bring together in each of fourteen different subjects the references which will best assist principals and teachers in improving instruction. They have set up specific practices and objectives which are thought to be most desirable, and they have raised questions regarding certain practices and activities which are observed by the supervisor when visiting the classroom. Items for supervisors' observation are listed in each subject. Teachers as well as supervisors should find this volume suggestive.

DETROIT PUBLIC SCHOOLS. *The Department of Special Education.* Detroit, Board of Education, 1925. 39 pp.

This well-illustrated pamphlet gives a short description of the special schools maintained by the Detroit Board of Education. These include special classes for mentally retarded children, special preparatory classes for pupils who for other reasons than mental deficiency have fallen behind in their school work, ungraded classes for cases of anti-social conduct, Braille and sight-saving classes, classes for the deaf, Leland school for crippled children, open-air schools and open-window rooms for under-nourished children, cardiac rooms, and speech-improvement classes.

BOOKS TO READ

BISCH, LOUIS E. *Clinical Psychology.* Baltimore, Williams and Wilkins Company, 1925. 346 pp.

A little knowledge of abnormal psychology and of clinical technique will materially aid the teacher in solving behavior problems which appear in the classroom. This present volume can do much to encourage the wider use of clinical psychology in the public schools. One reviewer says: "It comprises reliable descriptions of more clinical types of defective children than are usually found in a single volume. It also brings together important data liberally quoted from authoritative sources that will be of material assistance to students and teachers . . . . The point of view presented is essentially medical rather than psychological . . . . The subject-matter is relatively low on psychology, and the psychology employed is traditional rather than modern."

SMITH, NILA B. *One Hundred Ways of Teaching Silent Reading.* Yonkers-on-Hudson, New York, World Book Company, 1925. 149 pp.

This book, unrelated to any particular text or method, presents a variety of suggestions which may be used in the teaching of silent reading. In the opening chapters a history of the factors which have changed the emphasis in reading and general suggestions for teaching silent reading are given. The chapters which follow suggest exercises to improve such phases of reading as speed, comprehension, and retention.

ROSS, CLAY C. *The Relation between Grade-School Record and High-School Achievement: A Study of the Diagnostic Value of Individual Record Cards.* New York, Teachers College, Columbia University, 1925. 70 pp. (Teachers College, Columbia University, Contributions to Education, No. 166.)

So much has been written of the fallibility of teachers' marks that they seem to have fallen into disrepute, but Mr. Ross finds that they have some value. Although teachers may disagree on the percentage value of a pupil's examination paper they can rate him with reasonable accuracy as poor, average, good, or excellent. The author finds

a higher correlation between elementary teachers' marks and achievement in high school than between intelligence scores and high-school achievement.

NEW APPOINTMENTS

Fifteen new appointments, three professors, six assistant professors, and six instructors, were made to the faculty of the College of Education, Ohio State University, for the school year 1925–26. With these appointments the faculty of the College now numbers 71. A new department has also been added, namely, the Department of Music.

Professor Royal D. Hughes, formerly director of the Conservatory of Music, Findlay, Ohio, has been appointed as head of the Department of Music. Professor Hughes will offer two courses during the Fall Quarter, and the work of the Department will be considerably enlarged with the opening of the Winter Quarter. Professor Hughes has recently completed his work at Harvard for the Doctorate and during the past year was studying abroad as a traveling Fellow from Harvard.

In the Department of Fine Arts, Erwin Frey, late of the Columbus Art School, Columbus, Ohio, was appointed as an instructor to replace Bruce Saville, who resigned at the end of last year. Mr. Frey has studied at the Cincinnati Art Academy and at the Art Students' League, New York City. He also studied at the Beaux Art School of Design, New York, where he assisted Herbert Adams and Augustus Saint Gaudens. Mr. Frey was associated with the execution of the sculpture work at the Pan-Pacific Exposition in 1915, and later, was assistant medalist at the United States Mint, Philadelphia. At the Julien Academy in Paris Mr. Frey worked under Henri, Bouchard, and Paul Landowski. He received honorable mention at the Paris Salon, in 1923, and is a member of the National Sculpture Society.

C. E. Hindley, who was appointed as an assistant professor in the Department of History of Education, comes to the United States and to Ohio State University from Cambridge University, England. Professor Hindley comes to this country with the reputation of a scholar of unusual merit.

In the Department of Industrial Education, two changes have occurred this year. W. E. Warner has been added to the staff as an assistant professor and Professor Eldon L. Usry is on a year's leave of absence completing his work for the Doctorate at Columbia University. Professor Warner has served on the faculties of the City College of the City of New York and the University of Wisconsin.

Five appointments were made in the Department of Psychology: F. N. Maxfield, formerly Director of Special Education, State Department of Public Instruction, Harrisburg, Pennsylvania, has been added to the staff as a full professor. W. R. Wilson, formerly of the University of Washington, and Samuel Renshaw, formerly of the Kalamazoo State Normal School, Michigan, were appointed as assistant professors. Instructors added to the staff are: E. B. South, a member of the faculty at the Ohio University, who is on a year's leave of absence from that institution, and R. H. Seashore. Mr. Seashore is a son of Dean Seashore of the Graduate School at the University of Iowa.

California has furnished the Department of Vocational Education with two "native sons." Professor Frederick Horridge and Assistant Professor W. H. Stone, both from the University of California, will serve on the faculty in this department this year. Professor Horridge has been appointed head of the department.

E. W. Pahlow, formerly head of the History Department of the Ethical Culture School, New York City, has been added to the staff in the Department of Principles of Education. Three instructors were appointed in this department this year. T. L. Scholtz

and H. B. Alberty, who were teaching assistants in the department last year, were raised to the rank of instructor, and N. S. Maddox, who has served as Secretary of the College of Education, Ohio State University, for the past three years, was transferred to the department as an instructor.

AMERICAN EDUCATION WEEK

1925

CONSTITUTION DAY

Monday, November 16

The Constitution is the bulwark of democracy and opportunity.

1. Unity, justice, tranquility, defense, welfare, and liberty.
2. Our Constitution guarantees these rights.
3. Our Constitution is the expression of the will of the people.
4. One Constitution, one Union, one flag, one history.

Slogans—Ballots, not bullets.
Know the Constitution.
Visit your schools today.

PATRIOTISM DAY

Tuesday, November 17

The flag of the United States of America is the symbol of the ideals and institutions of our Republic.

1. Our flag insures the sanctity of life and the security of property.
2. Quickens the sense of public duty.
3. Voting is the primary duty of the patriot.
4. Our national honor must be preserved from unjust attack.

Slogans—America first.
Vote at all elections.
Visit your schools today.

SCHOOL AND TEACHER DAY

Wednesday, November 18

It is not too much to say that the need of civilization is the need of teachers.
—*Calvin Coolidge.*

1. The teacher is a nation builder.
2. The school is the foundation of democracy.
3. Provide for the needs of your schools.
4. Trained teachers require adequate compensation.
5. The teaching of patriotism is the duty of all public servants.

Slogans—The better the teacher the better the school.
Visit your schools today.

CONSERVATION AND THRIFT DAY

Thursday, November 19

The forests of America, however slighted by man, must have been a great delight to God.
—*John Muir.*

1. Conserve our national resources.
2. Prevent forest fires.
3. Industry and thrift spell prosperity.
4. Saving insures happiness.

Slogans—Plant a tree.
Work and save.
Visit your schools today.

KNOW YOUR SCHOOL DAY

Friday, November 20

Progressive civilization depends upon progressive education.

1. Schools must progress with the times.
2. Preparation for modern life demands a broader course of study.
3. The school must be kept abreast of science and invention.
4. A little invested in education saves much expended on crime, poverty, and disease.

Slogans—Good schools for all communities.
Make your schools livable.
Visit your schools today.

COMMUNITY AND HEALTH DAY

Saturday, November 21

Physical education means health and strength.

1. The school is a community center.
2. Equality of opportunity for every American boy and girl.
3. Public library service for every community.
4. Proper food and rest for children.
5. A health officer for every community.
6. Adequate parks for city, State, and Nation.

Slogans—A square deal for the country boy and girl.
A sound mind in a sound body.
Visit your neighbor today.

FOR GOD AND COUNTRY DAY

Sunday, November 22

Religion, morality, and education are necessary for good government.

1. Education in the home.
2. Education in the school.
3. Education in the church.

Slogans—A Godly nation cannot fail.
Visit your church today.

Ministers of all denominations are urged to preach a sermon on education, either morning or evening. All communities are urged to hold mass meetings. Local school authorities, posts of the American Legion, state educational institutions, and officers of civic and other cooperating organizations will be glad to furnish speakers. American Legion posts are making special preparation to be of assistance to the educational authorities in every community in the United States.